

Honors Chemistry - Bonding & Compounds

Problem Set

Stasya

1. Write the chemical formula for manganese (III) oxide.
2. Write the correct name for the ionic compound Fe_3N_2 .
3. Write the formula for calcium thiosulfate.
4. Write the formula for the molecular compound phosphorus tribromide.
5. Write the formula for the compound $\text{Au}_2(\text{SO}_4)_3$.
6. Write the formula for chromium (III) sulfate.
7. Write the name for the acid HClO_4 .
8. Write the formula for acetic acid.
9. Write the ionic/covalent name and the acid name of H_3PO_4 .
10. How many formula units are equal to 55.67 g of KMnO_4 ?
11. How many ions are in 5.58×10^{24} formula units of tin (IV) nitrate?
12. Find the % composition of oxygen in barium acetate.

13. What mass of oxygen would you have in a 7.5 g sample of zinc sulfite?
14. What is the molecular formula of a compound with 80.0% carbon and 20.0% hydrogen if it has a molar mass of 30. grams?
15. Ascorbic acid (vitamin C) contains 40.92% carbon, 4.58% hydrogen, and 54.50% O by mass. What is the empirical formula for ascorbic acid?
16. Give the oxidation numbers of all the elements in SO_4^{2-} .
17. Give the oxidation numbers of all the elements in N_2O_5 .
18. Determine the oxidation number of the sulfur atom in SO_3 .
19. Determine the oxidation number of the phosphorous atom in $\text{H}_5\text{P}_3\text{O}_{10}$.
20. Give oxidation numbers of O in O_3 .
21. Write the empirical formula if the compound has 67.31% carbon, 6.98% hydrogen, 4.62% nitrogen, and 21.10% oxygen.
22. What is the percent composition of water in cobalt (II) sulfate heptahydrate?
23. What is the percent composition of water in calcium nitrate tetrahydrate?